## STATE OF CALIFORNIA

## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

DIVISION OF STRUCTURE DESIGN SERVICES & EARTHQUAKE ENGINEERING OFFICE OF STRUCTURE OFFICE ENGINEER

P.O. BOX 942874 SACRAMENTO, CA 94274-0001

## **COMPARATIVE BRIDGE COSTS**

JANUARY 2002

The following tabular data gives some **general guidelines** for structure type selection and its relative cost. These costs should be used just for **preliminary estimates** until more detailed information is developed.

These costs reflect the 'bridge costs' only and *do not* include items such as: bridge removal, approach slabs, slope paving, soundwalls or retaining walls.

The following factors *must* be taken into account when determining a price within the cost range:

Factors for Lower End of Price Range	Factors for Higher End of Price Range	
	Long Spans, High Structure Height,	
	Environmental Constraints, Small	
	Project, Aesthetic Issues, Wet	
Short Spans, Low Structure Height, No Environmental Constraints, Large	Conditions (cofferdams required),	
Projects, No Aesthetic Issues, Dry Conditions, No Bridge Skew	Skewed Bridges	
Urban Location	Remote Location	
Seat Abutment	Cantilever Abutment	
Spread Footing	Pile Footing	
No Stage Construction	2 Stage Construction	

Factors That Will Increase the Price Over the High End fo the Price Range				
Structures With More Than 2 Construction Stages				
Unique Substructure Construction				
Widenings Less Than 5M				

	(STR. DEPT	H/MAX SPAN)	COMMON	COST RANGE	REMARKS
STRUCTURAL SECTION	SIMPLE	CONTINUOUS	SPAN RANGE (meters)	(\$ / M2)	REWARKS
RC SLAB	0.06	0.045	5-13	900 - 1,300	THESE ARE THE MOST COMMON TYPES AND ACCOUNT FOR ABOUT 80% OF BRIDGES ON CALIFORNIA STATE HIGHWAYS.
RC T-BEAM	0.07	0.065	12-18	1,000 - 1,950	
RC BOX	0.06	0.055	15-37	1,125 - 1,800	
CIP/PS SLAB	0.03	0.03	12-20	1,050 - 1,375	
CIP/PS BOX	0.045	0.04	30-76	875 - 1,625	
PC/PS SLAB	0.03 (+75mm AC)	0.03 (+75mm AC)	6-15	1,300 - 1,950	NO FALSEWORK REQUIRED
PC/PS T, TT, 1	0.06 (+75mm AC)	0.055 (+75mm AC)	9-37	1,100 - 1,800	
BULB T GIRDER	0.05	0.045	27-44	1,125 - 2,100	
PC/PS I	0.055	0.05	15-37	1,250 - 1,900	
PC/PS BOX	0.06	0.045	37-61	1,500 - 2,700	
STRUCT STEEL T	0.045	0.04	18-91	1,625 - 2,300	NO FALSEWORK REQUIRED

NOTE: Removal of a box girder structure costs from \$160 - \$215 per square meter.